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M.L.

Patent
Attorney's Docket No. 032266-003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
von Schaewen, Antje) Group Art Unit: Unassigned
Application No.: Unassigned) Examiner: Unassigned
Filed: June 9, 2000)
For: Plant GntI sequences and the use)
thereof for the production of plants)
having reduced or lacking N-acetyl)
glucosaminyl transferase I (GnTI))
activity)

PRELIMINARY AMENDMENT
PURSUANT TO MPEP 714.09

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to calculating the filing fee in this application, please amend this application as follows:

In the Specification

Page 1, before line 5 add the following:

— This is a continuation of Patent Cooperation Treaty application EP98/08001. That PCT application was filed on December 9, 1998 and designated the United States of America and additional countries. That PCT application is hereby incorporated by reference in its entirety. —

In the Claims

Please cancel claims 1 and 4-30.

Please add claim 31

31. A method for the production of glycoproteins displaying minimal, uniform GlcNac₂Man₅-residues, comprising cultivating a transgenic plant, parts of

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Sub 67 contd transgenic plants or transformed plant cells, and isolating the desired glycoprotein from the material cultivated, characterized in that the transgenic plant, parts of transgenic plants or transformed plant cells, respectively, is/are transformed with an antisense construct or a sense construct, comprising an antisense DNA or a sense DNA with respect to the DNA sequence for a gene or a cDNA for plant N-acetyl glucosaminyl transferase I or a part thereof, for elimination or reduction of the activity of said N-acetyl glucosaminyl transferase, wherein the antisense or sense construct optionally contains additional regulatory sequences for the transcription of the respective antisense or sense DNA. —

In claim 2, line 1, change "claim 1" to — claim 31—.

Please add claims 32-48.

32. The method according to claim 31, characterized in that the transgenic plant used is additionally transformed with the gene encoding the desired glycoprotein.
33. The method according to claim 2, characterized in that the transgenic plant used is additionally transformed with the gene encoding the desired glycoprotein.
34. The method according to claim 3, characterized in that the transgenic plant used is additionally transformed with the gene encoding the desired glycoprotein.
35. An isolated DNA, comprising a DNA molecule encoding a sequence or the complementary thereof, which is selected from the group consisting of:
- SEQ ID NOs: 1, 3 and 5;
 - a DNA sequence encoding the amino acid sequence of SEQ ID Nos: 2, 4 or 6;
 - a DNA sequence which hybridizes under stringent conditions to SEQ ID NOs: 1, 3 or 5, or the complementary thereof; and

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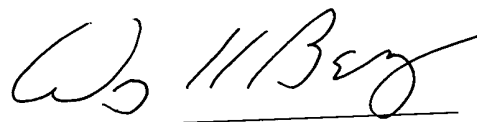
a DNA sequence which hybridizes under stringent conditions to a DNA sequence, or the complementary thereof, which encodes SEQ ID NOs: 2, 4 or 6.

36. An isolated DNA which encodes a polypeptide having N-acetyl glucosaminyl transferase I activity and which hybridizes under stringent conditions to a DNA of claim 35.
37. A DNA construct comprising the DNA of claim 35 in the sense or anti-sense orientation.
38. A DNA construct comprising the DNA of claim 36 in the sense or anti-sense orientation.
39. A microorganism transformed with the DNA construct of claim 37.
40. A microorganism transformed with the DNA construct of claim 38.
41. A protein encoded by the DNA of claim 35.
42. A protein encoded by the DNA of claim 36.
43. An antigen, characterized in that it comprises:
the amino acid sequence given in SEQ ID NO: 2, SEQ ID NO: 4 or SEQ ID NO: 6, or
amino acids 74 to 446 of the amino acid sequence given in Fig. 2, or
an amino acid sequence derived from the amino acid sequences given in SEQ ID NO: 2, 4 or 6 by substitution, deletion, insertion and/or modification of individual amino acids and/or smaller groups of amino acids,
with the proviso, that upon immunization of a host with the antigen, said antigen raises an immunological reaction, including the production of antibodies directed against the antigen.
44. A monoclonal or polyclonal antibody, characterized in that it specifically recognizes and binds at least one protein of claim 41.
45. A monoclonal or polyclonal antibody, characterized in that it specifically recognizes and binds at least one protein of claim 42.

46. A monoclonal or polyclonal antibody, characterized in that it specifically recognizes and binds at least one antigen of claim 43.
47. A transgenic plant, transgenic seed, transgenic reproduction material, part of a transgenic plant or transformed plant cell, obtainable by integration of one or more antisense or sense DNA of claim 35 under the control of a promoter effective in plants, into the genome of a plant, or by viral infection by means of a virus containing one or more antisense or sense DNA of claim 35, for an extrachromosomal propagation and transcription of the antisense construct(s) in the plant tissue infected.
48. A transgenic plant, transgenic seed, transgenic reproduction material, part of a transgenic plant or transformed plant cell, obtainable by integration of one or more antisense or sense DNA of claim 36 under the control of a promoter effective in plants, into the genome of a plant, or by viral infection by means of a virus containing one or more antisense or sense DNA of claim 36, for an extrachromosomal propagation and transcription of the antisense construct(s) in the plant tissue infected. —

Respectfully submitted,

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